

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A Soller slit device for collimating high energy radiation X-rays comprising:

a plurality of substantially parallel blades constructed from a material having a density less than 6 g/cm³ and operative to transmit high energy radiation parallel to the blades and glass sheets each having a thickness less than 250 µm and whose surfaces have a non-reflective treatment to absorb divergent radiation X-rays.

Claim 2-4. (Canceled).

5. (Original) The Soller slit device of claim 1 wherein said device transmits at least 60% of incident high-energy radiation.

6. (Original) The Soller slit device of claim 5, wherein the transmission efficiency is in the range of 60-80%.

7. (Original) The Soller slit device of claim 1, wherein the length of each blade in the direction of transmission is greater than 5 cm.

8. (Original) The Soller slit device of claim 7, wherein the blade length is at least 12 cm.

9. (Original) The Soller slit device of claim 8, wherein the blade length is in the range of 12-15 cm.

10. (Original) The Soller slit device of claim 1, wherein the thickness of each blade is no greater than 70 μm .

11. (Original) The Soller slit device of claim 10, wherein the thickness of each blade is approximately 50 μm .

Claim 12. (Canceled).

13. (Currently Amended) The Soller slit device of claim [[12]] 1, wherein the surface of each of the blades [[is]] has a coating that is non-reflective to X-rays.

14. (Currently Amended) The Soller slit device of claim [[12]] 13, wherein the blades each have a non-reflective coating of barium sulfate.

15. (Currently Amended) The Soller slit device of claim [[12]] 1, wherein the surface of each of the blades is etched to prevent reflection.

16. (Currently Amended) A system for performing high energy radiation diffractometry, comprising:

a high energy radiation X-ray source;

a high energy radiation collimating device comprising a plurality of substantially parallel plates constructed from glass sheets each having a thickness less than 250 µm and whose surfaces have a non-reflective treatment to absorb divergent X-rays; and

a device for collecting high energy radiation after the high energy radiation impinges on a sample to be examined[[;]]

~~wherein the high energy collimating device has a divergence angle of less than 0.1 and a transmission efficiency of at least 60%.~~

Claims 17-18. (Canceled).

19. (Original) The diffractometry system of claim 16, wherein the high energy radiation collimating device comprises a Soller slit device.

Claims 20-22. (Canceled)

23. (New) The diffractometry system of claim 16, wherein the length of each blade in the direction of transmission is greater than 5 cm.

24. (New) The diffractometry system of claim 23, wherein the blade length is at least 12 cm.

25. (New) The diffractometry system of claim 24, the blade length is in the range of 12-15 cm.

26. (New) The diffractometry system of claim 16, wherein the thickness of each blade is no greater than 70 μ m.

27. (New) The diffractometry system of claim 26, wherein the thickness of each blade is approximately 50 μ m.

28. (New) The diffractometry system of claim 16, wherein the surface of each of the blades has a coating that is non-reflective to X-rays.

29. (New) The diffractometry system of claim 28, wherein the blades each have a coating of barium sulfate.

30. (New) The diffractometry system of claim 16, wherein the surface of each of the blades is etched to prevent reflection.